UNITED STATES PATENT AND TRADEMARK OFFICE

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EXAMINER
ANYA, CHARLES E

ART UNIT	PAPER NUMBER
2126	4

DATE MAILED: 12/20/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 07-01)

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3/_ MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on _23 February 2000_ .

2a) ☐ This action is **FINAL**.   2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under _Ex parte Quayle_, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) _1-27_ is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) _1-27_ is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11) ☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

    If approved, corrected drawings are required in reply to this Office action.

12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____ .

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

    a) ☐ The translation of the foreign language provisional application has been received.

15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .

4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: .

DETAILED ACTION

Claim Rejections - 35 USC § 112

1.   The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly
> claiming the subject matter which the applicant regards as his invention.

2.   Claim 4 recites the limitation "said driver" in line 22. There is insufficient

antecedent basis for this limitation in the claim.

The Examiner will take "said driver" to mean "said base driver".

3.   The claims are generally narrative and indefinite, failing to conform with current

U.S. practice. The Examiner noticed what appears to be a grammatical error ("an

node") in claim 18, line 1. The Examiner will change the phrase "an node" to "a node".

Claim Rejections - 35 USC § 103

1.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

2.   Claims 1 – 3, 6, 11 – 14, 20 – 22 and 26 – 27 are rejected under 35 U.S.C.

103(a) as being unpatentable over U.S. Pat. No. 6,253,334 B1 to Amdahl et al. in view

of McIntyre.

As to claim 1, Amdahl teaches an Application Programming Interface (Multispan

Col. 6, Ln. 46 – 58), an Identify Address Function (LSLRegisterMLIDTag Col. 8, Ln. 42

– 53), a Base Driver (Driver 120, Driver 122 Col. 7, Ln. 62 – 67, MLID Col. 8, Ln. 42 -

53), Network Interface (NIC 124, NIC 126 Col. 8, Ln 1 – 21), an Update Node Address

Function ("...update call..." Col. 8, Ln. 54 – 62), a New Node Address, a Configuration

Storage and a Receive Address Filtering table (Col. 8, Ln. 54 – 62, Col. 9, Ln. 63 – 67).

Amdahl does not explicitly teach a stored node address.

McIntyre teaches a Stored Node Address (MAC Address Col. 7, Ln. 45 – 67). It would

have been obvious to apply the teaching of McIntyre to the system of Amdahl. One

would have been motivated to make such a modification to allow the program logic to

give override instructions to the drivers (Col. 7 Ln. 59 – 67).

As to claim 2, Amdahl teaches a Request ("...initialization..." Col. 8, Ln. 42 – 53)

and a Response (Col. 8, Ln. 52 – 53).

As to claim 3, Amdahl teaches the step of inspecting the configuration storage of

the base driver, the storage contain an entry identifying the stored node address (Col. 8,

Ln. 54 – 61).

As to claim 6, claim 1 meets claim 6 since claim 6 is a computer readable

medium of claim 1.

As to claim 11, Amdahl teaches the step of providing transparent fail-over (Col. 4

– Col. 10), a First Network Interface (figure 3 Primary NIC 124), a Second Network

Interface (figure 3 Secondary NIC 126), a Status Function ("...probe...", Col. 4, Ln. 35 –

59, Col. 5, Ln. 55 – 67, Col. 6, Ln. 1 – 20), a First Base Driver (figure 3 MLID Primary

Driver 120: NOTE: The MLID Primary Driver 120 is associated with the Primary NIC

124), a Update Address Function ("...recovery procedure..." Col. 4, Ln. 35 – 59) and a

Second Base Driver (figure 3 MLID Secondary Driver 122: NOTE: The Secondary MLID

Driver 122 is associated with Secondary NIC 126).

As to claim 12, Amdahl teaches a Novell ODI Complaint Network (Novell

Netware Implementation Col. 6, Ln. 21 – 46) and at least one ODI MLID Control Routine

(figure 3 Primary MLID Driver 120).

As to claim 13, see the rejection of claims 1 and 11.

As to claim 14, Amdahl teaches the step of providing transparent load balancing

of data transmissions (Col. 7, Ln. 56 – 67, Col. 8, Ln. 1 – 21), a Second Network

Interface (NIC 124 Col. 8, Ln. 1 – 21), a Workload (Col. 8, Ln. 1 – 7), a Distribution

Function (Multispan Prescan Module 110, Col. 7, Ln. 62 – 67, Col. 8, Ln. 42 – 61), a

Portion of Data (Data Packets 104 Col. 7, Ln. 62 – 67).

As to claim 20, Amdahl teaches a Network Environment (figure 1), a First

Network Interface (Primary NIC Col. 4, Ln. 42 – 59), a First Driver (MLID Primary 120),

a Second Network Interface (Secondary NIC Col. 42 – 59), a Second Driver (MLID

Secondary 122), if the first network interface is inoperative, instructing the second driver

to store the first network interface address MAC address (Col. 4, Ln. 50 – 59: NOTE:

Designating one of the remaining NIC(s) as the new primary inherently implies changing

the secondary NIC MAC address to the old primary), directing the second driver to

activate second network interface (Process State 62 Col. 5, Ln. 55 – 67) and directing

the first driver to deactivate the first network interface (State 58 Col. 5, Ln. 55 – 67).

Amdahl is silent with reference to a driver memory and MAC address.

McIntyre teaches Driver Memory ("...multicast address..." Col. 9, Ln. 41 – 56) and MAC

Address (Col. 9, Ln. 30 – 56). It would have been obvious to apply the teaching of

McIntyre to the system of Amdahl. One would have been motivated to make such

modifications in order to register NIC driver (Col. 9, Ln. 41 – 46).

As to claim 21, Amdahl teaches a Novell Based Network (Novell Netware

Implementation Col. 6, Ln. 21 – 67) and Novell Netware implementation is ODI

complaint.

As to claim 22, see the rejection of claim 15.

As to claim 26, see the rejection of claim 1.

As to claim 27, see the rejection of claim 7.

3.   Claims 4 – 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over

U.S. Pat. No. 6,253,334 B1 to Amdahl in view of McIntyre as applied to claim 1 above,

and further in view of Fu et al (page 40 – 43).

As to claim 4, Amdahl teaches a Driver Identification Function (INETCFG

Command, LSLRegisterMLIDTag Col. 8, Ln. 32 – 53).

Amdahl does not teach a response selected from a group consisting of a predetermined

identifier, a base driver revision number and identification of a vendor of the base driver.

Fu does not explicitly teach these limitations, however, Fu teaches that the MLID drivers

registers information about themselves with the LSL. This information includes network

card information. A predetermined identifier, a base driver revision number and

identification of a vendor of the base driver are driver and network card information and

are therefore implied. It would have been obvious to apply the teaching of Fu to the

system of Amdahl. One would have been motivated to make such modifications in order

to route data in packets for transmission (figure 2 page 41 line 5 – 34).

As to claim 5, see the rejection of claim 4.

4.   Claims 7 – 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over

U.S. Pat. No. 6,253,334 B1 to Amdahl in view of McIntyre as applied to claim 1 above,

and further in view of Weigel.

As to claim 7, Amdahl does not teach a first transmission function a compatible

format, a network source, an incompatible format, a network destination and a second

transmission function.

Weigel teaches a First Transmission Function (Driver Support Layer 306 Col. 7, Ln. 55

– 67), a Compatible Format and an Incompatible Format (Col. 7, Ln. 55 – 67), a

Network Source (Network 310 Col. 7, Ln. 39 – 67), a Network Destination (I/O Manager

218, Executive 206 Col. 7, Ln. 66 – 67) and Second Transmission Function ("…a

command…" Col. 8, Ln. 1 – 12). It would have been obvious to apply the teaching of

Weigel to the system of Amdahl. One would have been motivated to makes such

modifications to provide properly formatted bit pattern suitable for transmission over the

network (Col. 8, Ln. 1 – 12).

As to claim 8, claim 7 meets claim 8 except for a report function and a receive

function.

McIntyre teaches a Report Function (HeartBeat Logic 502 Col. 9, Ln. 49 – 56 and a

Receive Capabilities Function (Col. 10, Ln. 35 – 44). It would have been obvious to

apply the teaching of McIntyre to the system of Amdahl and Weigel. One would have

been motivated to makes such modifications in order to periodically update the status table (Col. 10, Ln. 45 – 51).

As to claim 9, Amdahl does not explicitly teach a virtual LAN function and a disconnect function, however being that the multispan processes support LAN traffic and LAN drivers (Col. 6, Ln. 47 – 58), entering virtual LAN operative state will inherently be implemented and in Netware, packets are sent via event control block, which contains information on where to send the packet (Col. 7, Ln. 40 – 55) and inherently contains the end of packet transmission and therefore will support a disconnect function.

As to claim 10, see the rejection of claim 7.

5.   Claims 15 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Pat. No. 6,131,163 to Weigel in view of applicant's admitted prior art (hereinafter referred to as APA page 6 – 7).

As to claim 15, Weigel teaches routing the first traffic to a virtual interface driver (Protocol Proxy Manager 350 Col. 9, Ln. 1 – 22), repackaging the first traffic by the virtual interface driver and providing the repackaged traffic to a virtual protocol stack (Protocol Proxy Manager 350 Transport Layer Col. 8, Ln. 66 – 67, Col. 9, Ln. 1 – 22: NOTE: Protocol Proxy Manager act as transport layer for the proxy protocol layers), sending the repackaged traffic to the intermediary layer and routing the repackaged traffic by the intermediary layer to an interface driver (Communication Path 356 Driver Support layer 306 Col. 7, Ln. 13 – 15).

APA teaches receiving first network traffic with a protocol stack ((Protocol Stack 220 page 6 line 26 – 31) and sending the first traffic to an intermediary layer (LSL 222 page 6, line 26 – 31). It would have been obvious to apply the teaching of APA to the system of Weigel. One would have been motivated to make such modification in order to transmit the data unto the wire (page 7, line 1 – 6).

As to claim 19, see the rejection of claim 15.

6.   Claims 16 – 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S.Pat. No. 6,131,163 to Weigel in view APA as applied to claim 15 above, and further in view of Amdahl et al.

As to claim 16, Weigel as applied to claim 15 is silent with reference to locating a fail over network interface having a node address memory, identifying a failed network interface having a node address, storing the node address in the node address memory and routing network traffic for the failed network interface through the fail over network interface.

Amdahl teaches locating a fail over network interface having a node address memory (Col. 8, Ln. 54 – 61), identifying a failed network interface having a node address Col. 8, Ln. 54 – 61), storing the node address in the node address memory and routing network traffic for the failed network interface through the fail over network interface ("...update call...." Col. 8, Ln. 54 – 61). It would have been obvious to apply the teaching of Amdahl to the system of Weigel as applied to claim 15. One would have been motivated to make such modifications to provide a secondary driver for routing packets (Col. 8, Ln. 15 – 21).

As to claim 17, Weigel teaches a First Protocol Format and a Second Network Protocol Format (Col. 7, Ln. 55 – 67).

As to claim 18, Weigel teaches a Base Driver (Driver 304a Driver 304b Driver 304c).

Weigel does not teach a node identification request, a potential fail over network Interface, receiving a response from the driver, an authentication string, verifying the authentication string and a predetermined value.

Amdahl teaches a Node Identification Request ("...probe..." Col. 4, Ln. 42 – 59), a Potential Fail Over Network Interface ("...secondary NIC(s)..." Col. 4 Ln. 42 – 59) and receiving a response (Col. 4, Ln. 42 – 59). Although Amdahl is silent with reference to an authentication string, verifying the authentication string and a predetermined value, the process of determining a probe packet failure, recovery procedure and process 45 entails providing information that shows the state of network interface (Col. 4, Ln. 42 – 59, Col. 5, Ln. 36 – 67). It would have been obvious to apply the teaching of Amdahl to the system of Weigel. One would have been motivated to make such modifications to provide a means of detecting network failure (Col. 4, Ln. 42 – 45).

7.   Claims 23 – 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Pat. No. 6,253,334 B1 to Amdahl et al. in view of Sampat.

As to claim 23, Amdahl teaches a method for load balancing transmissions ("...load sharing..." Col. 8, Ln. 1 – 7), a Network (Network Backbone Col. 7, Ln. 62 – 67), a First Network Interface ("...primary NIC..." Col. 8, Ln. 1 – 7), a First Driver (Primary Driver 120 Col. 8, Ln. 8 – 14: NOTE: Each primary NIC has a corresponding

primary driver), a Second Network Interface (NIC 126 Col. 8, Ln. 7 – 14), a

Communication Load (Data Packet 104 Col. 8, Ln. 1 – 7), a Second Driver (Secondary

Driver Module 122 Col. 8, Ln. 7 – 14: NOTE: Each secondary NIC has a corresponding

secondary driver), an Updateable Driver Memory (MLID Col. 8, Ln. 49 – 53), a MAC

Address (MLID Col. 8, Ln. 49 – 53) and instructing the second driver to store the first

network interface Mac address in the updateable driver memory (Col. 4, Ln. 50 – 59:

NOTE: Designating one of the remaining NIC(s) as the new primary inherently implies

changing the secondary NIC MAC address to the old primary).

Amdahl is silent with reference to receiving data from a network source, apportioning

the received data into a first and a second portion, sending the first portion to the first

driver and sending the second portion to the second driver.

Sampat teaches apportioning the received data into a first and a second portion (Send

Process Manager 2310 Col. 24, Ln. 35 – 50), sending the first portion to the first driver

("...low Dos memory..." Col. 24, Ln. 35 – 50: NOTE: The driver resides in low DOS

memory and communicates with the network interface to send outgoing packets) and

sending the second portion to the second driver (Although, Sampat does not explicitly

teach transmitting the second portion to the second driver, in multicasting environment a

copy of the ECB may inherently be communicated to the network. NOTE: There is

more than one copy of the ECB (Col. 24 Ln. 35 – 50). It would have been obvious to

apply the teaching of Sampat to the system of Amdahl. One would have bee motivated

to make such modifications in order transmit packets from send queue to the network

(Col. 24 Ln. 35 – 36).

Also see the rejection of claim 15.

As to claim 24, claim 15 meets claim 24 except for the step of a communication protocol bound to a virtual network interface.

Amdahl is silent with reference to the step of a communication protocol bound to a virtual network interface.

McIntyre teaches the step of a communication protocol bound to a virtual network interface (Col. 7, Ln. 1 – 20). It would have been obvious to apply the teaching of McIntyre to the system of Amdahl and Sampat. One would have been motivated to make such modification to provide data routing through one port or the other (Col. 7, Ln. 16 – 20).

As to claim 25, see the rejection of claim 17.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Charles E Anya whose telephone number is (703) 305-3411. The examiner can normally be reached on M – F (First Friday Off) from 8:30 am to 5:30 pm.

The fax phone number for the organization where this application or proceeding is assigned is (703) 746-7239.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.

Charles E Anya
Examiner
Art Unit 2126